

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: KIM, Il; LEE, Sang Hyun; AN, Jun Tai

SERIAL NO.:

FILED: Herewith

TITLE: POLYETHERPOLYOL HAVING STEREOREGULARITY AND METHOD OF PREPARING THE SAME

Preliminary Amendment: CLAIM AMENDMENTS

1. (Currently amended) A polyetherpolyol for use in production of polyurethane, wherein ~~constitutive~~ comprising carbons of the polyetherpolyol have with stereoregularity of syndiotactic triad.

2. (Original) The polyetherpolyol as defined in claim 1, wherein methine carbon in ether bonds of the polyetherpolyol has stereoregularity of syndiotactic triad.

3. (Original) The polyetherpolyol as defined in claim 1, wherein carbons in ether bonds comprise 90% or more of head-to-tail sequence.

4. (Original) The polyetherpolyol, as defined in claim 1, comprising a molecular weight of 1,000-12,000, and a functional group having a mol content of 5% or less with a number of 2-8.

5. (Original) The polyetherpolyol as defined in claim 2, wherein a syndiotactic triad fraction of the methine carbon is not less than 45 mol% at 74.5-75.0 ppm in C-NMR.

6. (Currently amended) A method of preparing polyetherpolyol, comprising polymerizing an epoxy compound in the presence of a double metal cyanide complex catalyst represented by Formula 1, below:

Formula 1



wherein, M is Zn and M' is Co (III), and L is tertbutanol, and L' is polytetrahydrofuran, and a, b, c and d are integers, and a sum of a, b, c and d is equal to that of electrovalences of M and M'.

7. (Currently amended) The method as defined in claim 6, wherein the epoxy compound comprises propylene oxide.